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None

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(54) Frozen confection

(57) Couverture coated, bar shaped, frozen confection comprising at least one layer of ice cream (4; 13), at least one layer of chewy confection material (6; 15) and at least one continuous layer of a crisp confection material (1; 11) enrobed with a moisture barrier material (3; 12, 16). The methods of manufacturing this product comprise uniting the internal ingredients and thereafter enrobing with couverture or premoulding the couverture coating, putting the internal ingredients therein and finally closing the coating.

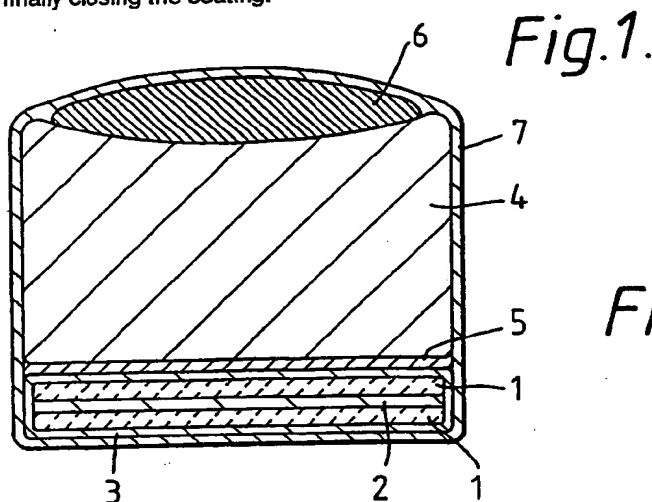
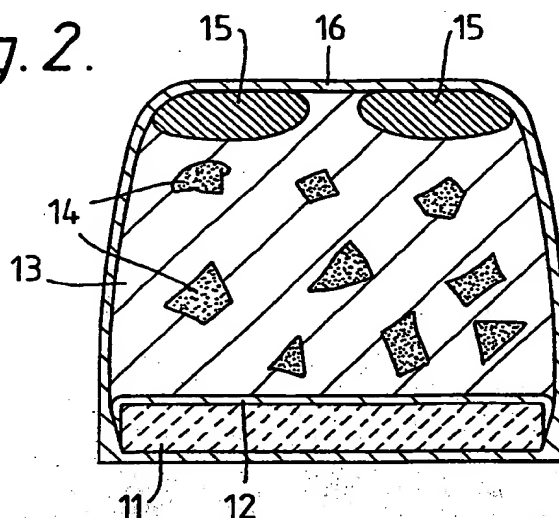


Fig. 2.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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Fig. 1.

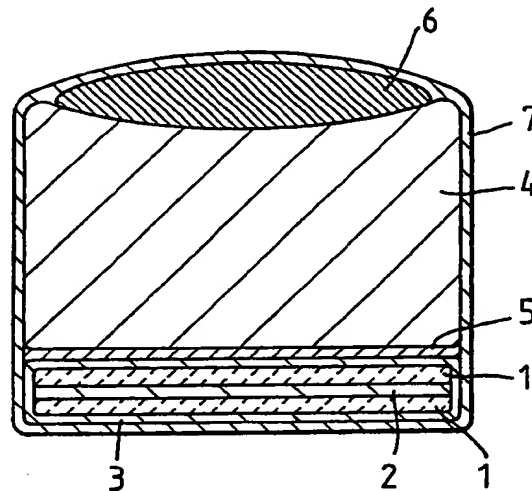


Fig. 2.

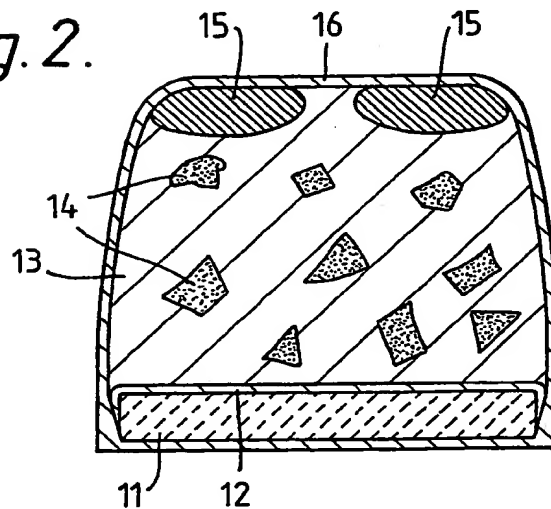
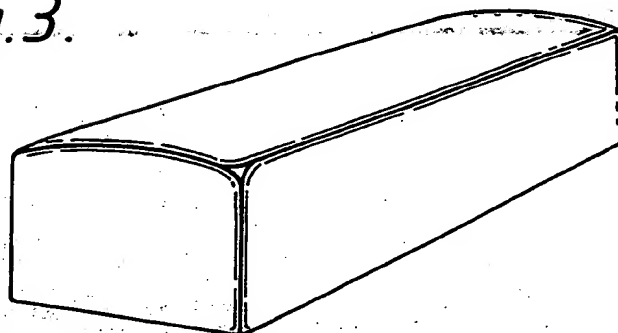


Fig. 3.



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Fig.4.

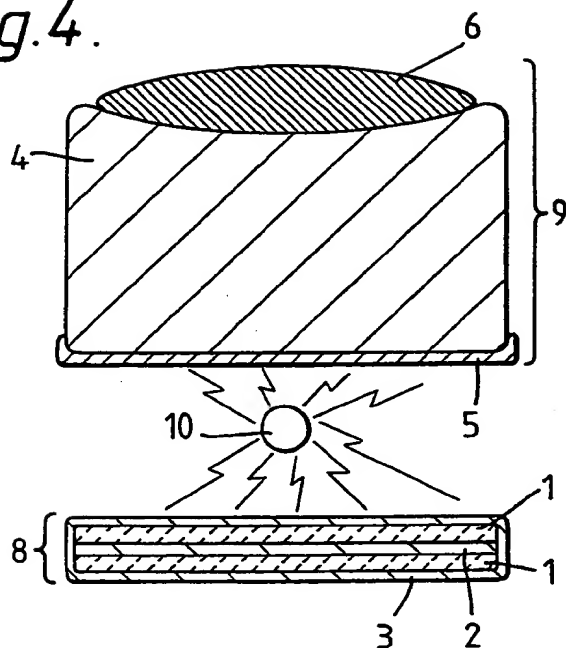


Fig.5.

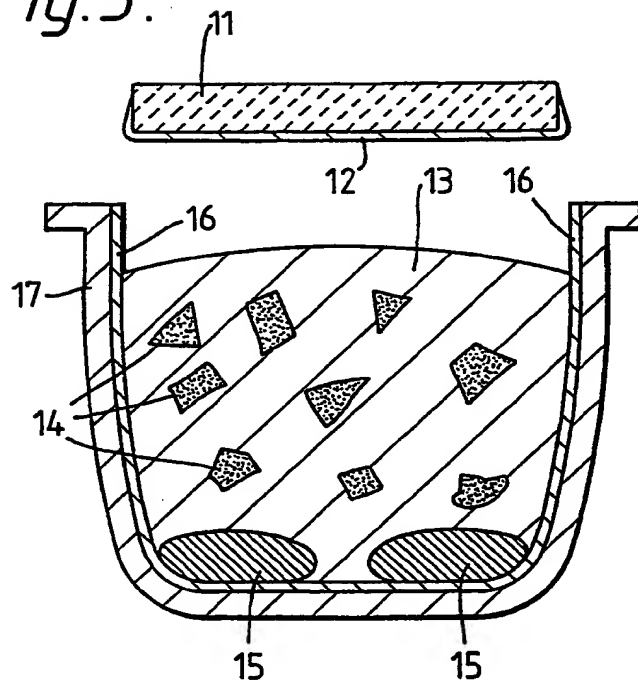
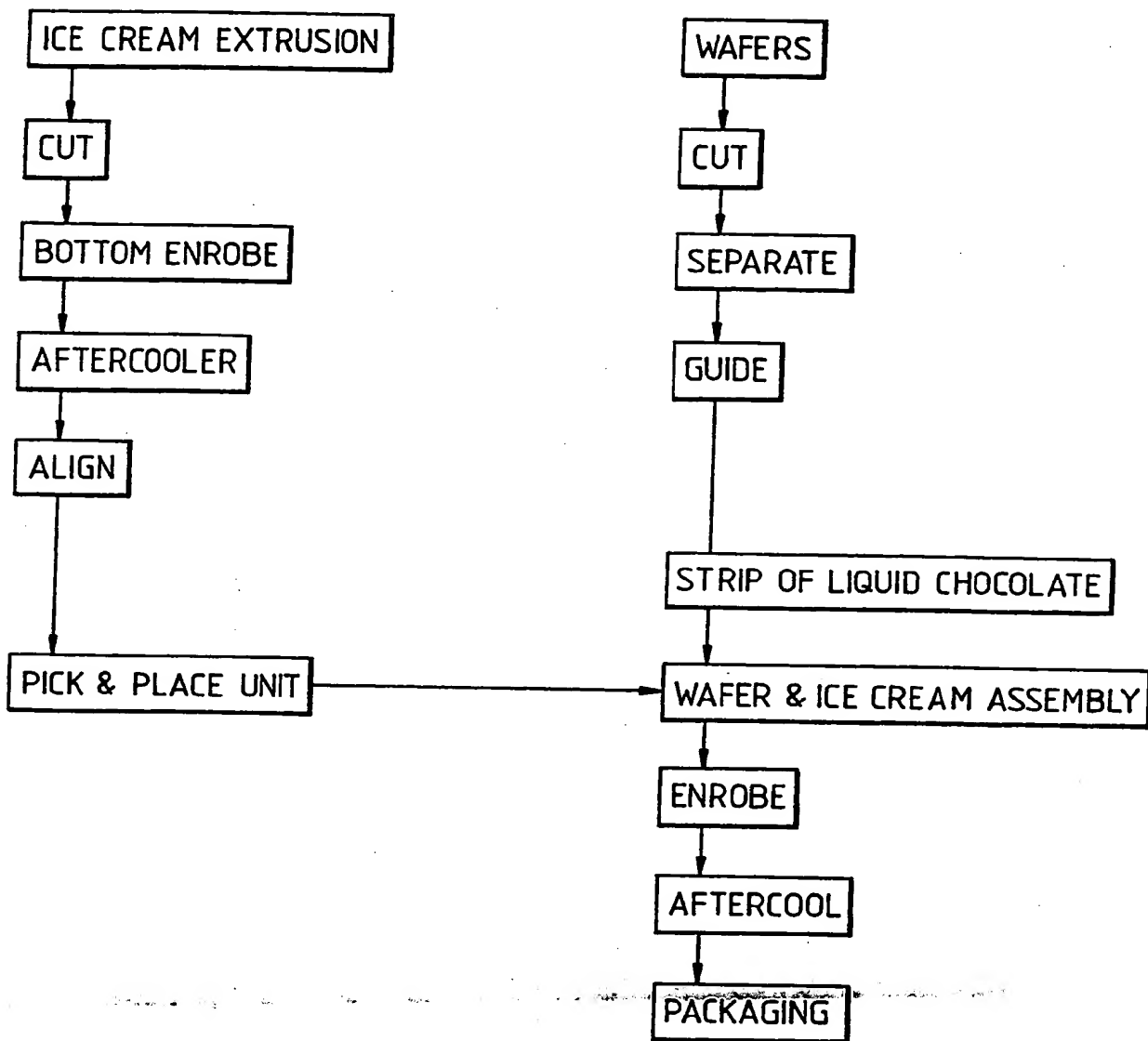


Fig. 6.



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FROZEN CONFECTION

5 The present invention relates to a composite frozen confection, shaped as a bar and comprising materials of different texture and taste.

10 Frozen confections comprising ice cream, couverture and a chewy confection material like fudge and toffee in a bar shape are well known in the art and have been on sale for many years.

15 In the present specification, the term "ice cream" not only comprises ice confection material made with cream, milk fat or any other animal or vegetable fat, for example ice milks, frozen yoghurts and frozen custards, but also any other aerated frozen confection material such as mollarine, milk ice and such like products comprising sugar substitute and/or fat substitutes.

20 The term "couverture" comprises chocolate, milk chocolate, mock chocolate, white chocolate, fat coatings and similar confectionery products comprising fat substitutes.

25 "Bar products" and "bar shape" in this specification and claims are well-known terms in the frozen confection industry and refer to any oblong product for one person having about a rectangular base while the cross section may be rectangular, square, trapezoid, domes or roundish.

5 An aim of the invention is to provide a bar-shaped, frozen confection having a high textural contrast and, as a result thereof, a different eating experience from the existing ones. The invention also seeks to provide products having a good keepability and being capable of an economic industrial production.

10 The invention provides thereto a couverture-coated, bar-shaped, frozen confection comprising at least one layer of ice cream, at least one layer of chewy confection material and at least one continuous layer of a crisp confection material enrobed with a moisture barrier material.

15 A particular feature of the invention is the positioning of the chewy layer on one surface of the ice cream component and the crisp layer on the opposite surface. This arrangement gives a particularly pleasant and enjoyable eating sensation as the bite passes through
20 the chewy, ice cream and crisp layers in turn.

25 For an increased crispness experience, preferably the layer of crisp confection material is composed of a plurality of crisp layers laminated with an adhesive confection material of low water activity, i.e. sufficiently low to prevent moisture from migrating from said adhesive confection material to the crisp layers, such as toffee, fudge, caramel and sugar paste.

30 In a convenient embodiment as regards manufacture thereof, the moisture barrier coating is a couverture coating. Other moisture barrier coatings such as fat coatings, casein coatings etcetera may be used as well.

35 The invention includes a method of manufacturing a couverture-coated, bar-shaped, frozen confection product which comprises assembling an ice cream component, having

a chewy layer, and a crisp component in alignment with an intermediate moisture barrier, preferably couverture, and enrobing the assembly.

5 The invention also provides a method of manufacturing the above-mentioned product, comprising coating at least one side of an oblong slab of crisp confection material with a moisture barrier material, preferably couverture, putting this coated slab in contact with a piece of ice
10 cream of about the same length and width as the slab while arranging an adhesive material in between, applying at least one layer of chewy confection material, either before or after combining the ice cream and the crisp slab, and finally enrobing the composite so obtained with couverture.

15 In a convenient embodiment, couverture, while in a molten state, is used as the adhesive material. This molten state can be realized by combining the materials so quickly after coating with couverture that the latter has
20 not hardened yet. In practice, however, this may give problems, particularly if the process is stopped for some time, and therefore remelting the couverture by application of heat is preferred. For an improved contact between the ice cream piece and the crisp slab, it is preferred that
25 both, at least at the sides facing each other, are coated with couverture.

 In another convenient embodiment, in particular for easier positioning and more accurate shaping, a mould
30 having the proper sizes for a bar product is internally coated with fluid couverture, thereafter partly filled with a layer of ice cream and at least one layer of chewy confection material, a slab of crisp confection material having a moisture barrier coating on at least the side to
35 contact the ice cream is put in contact with the ice cream and the open side of the mould is closed with couverture. For safely protecting the crispness of the crisp material.

over extended periods, it is preferred that the slab of this material is entirely enrobed with couverture before contacting it with the ice cream.

5 The invention will be explained in the following description of some preferred embodiments thereof, both regarding the product and the process.

In the drawings

10 Fig.1 shows a cross-sectional view of one embodiment of a confection according to the invention;

Fig.2 shows a similar view of another embodiment;

15 Fig.3 shows a perspective view of the confection of Fig. 1;

Fig.4 shows a schematic representation of a method of manufacturing the product of Fig. 1,

Fig.5 shows a schematic representation of such a method for the product of Fig. 2, and

20 Fig.6 is a block diagram of a production process.

25 The confection product, as shown in cross section in Fig. 1, comprises two slabs of crisp baked wafers 1 laminated together by a layer of nougat 2 and enclosed in a layer of couverture 3.

30 An oblong bloc of ice cream 4 having a bottom coating 5 of couverture is adhered on the top couverture layer 3 of the wafer laminate 1,2. A layer 6 of toffee is positioned on top of the ice cream bloc 4 and this composite is enclosed in a couverture layer 7.

35 This product, as shown in perspective view in Fig. 3, can be manufactured by coating an oblong slab 1 of wafer with a layer of warm fluid nougat 2 and pressing a second slab of wafer 1 of the same size as the first one onto the

nougat layer to form a wafer sandwich. This wafer sandwich is enrobed with molten couverture 3, resulting in a lower intermediate product 8.

5 An oblong bloc of hardened ice cream 4 having the same base size as the wafer slabs 1 is provided with a layer of
 toffee 6, which is dispensed in liquid state on top of said
 bloc 4. The lower part of the bloc is dipped in molten
10 couverture forming a bottom coating 5. Thereby an upper
 intermediate product 9 is obtained.

 After sufficiently heating the top surface of the
 couverture enrobing 3 of the lower intermediate product 8
 for melting it as schematically shown in Fig. 4, using any
15 type of heat source 10, such as an IR source, a gas flame,
 the upper intermediate product 9 is put on top with
 sufficient pressure to unite both products 8 and 9.

 Finally, the combined products are entirely enclosed
20 in molten couverture, e.g. by enrobing, dipping, spraying,
 as is usual in frozen confectionery, resulting in the
 product as shown in Fig. 1.

 An alternative embodiment of the product of the
25 invention is shown in cross section in Fig. 2. A base slab
 11 of crisp cooker-extruded cereal product having a real
 chocolate coating 12 on top is supporting an oblong bloc 13
 of ice cream having nut particles 14 dispersed therein. On
 top of this bloc, two longitudinal strands 15 of toffee are
30 arranged and the combined product is enclosed in a real
 chocolate coating 16.

 A second manufacturing method suitable for
 manufacturing the product as shown in Fig. 2 is
35 schematically shown in Fig. 5.

 A mould 17, which may be rigid, e.g. of metal, or

flexible, e.g. a plastic of polymer material, is internally coated with a real chocolate layer 16. Two longitudinal strands 15 of toffee are deposited on the bottom of the coated mould and thereafter fresh frozen ice cream 13 having hazelnut particles 14 dispersed therein is dispensed into this mould. A wafer slab 11 having a chocolate coating 12 on one side thereof is put into the mould with the coated side in contact with the viscous ice cream 13 to almost fill the moulding cavity of this mould. The opening of said cavity is closed by pouring or spraying molten chocolate therein, so as to adhere to the upper edges of the chocolate layer 16. The completed frozen confection product is demoulded after the chocolate coating has sufficiently shrunk to release itself from the mould.

Fig. 6 shows a block diagram of a production process.

Ice cream was extruded in a continuous length having the depth and width of the end product component. The length had a depression in the top surface which received the chewy component. This extruded material, ie ice cream plus chewy layer, was then cut to length to form portions by a knife and then hardened by passing it through a chill cabinet. The portion was then passed through a molten couverture to enrobe the bottom surface or, preferably, through a couverture curtain to provide complete enrobing. The enrobed ice cream then passed through an aftercooler to obtain rapid solidification of the couverture.

In parallel with the previous procedure, a sheet of wafers, comprising two thin sheets with an intermediate layer of nougat, was cut to size. These wafers, which form the base of the bar product, were separated and guided to a station where a strip of liquid chocolate was placed on the upper surface.

The cooled enrobed ice cream was then aligned in a

unit designed to pick up an ice cream component and assemble it on a wafer in alignment.

5 The liquid chocolate strip caused the wafer and ice cream component to adhere in alignment. The assembly was then completely enrobed, cooled and packaged.

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CLAIMS

1. Couverture-coated, bar-shaped, frozen confection comprising at least one layer of ice cream (4; 13), at least one layer of chewy confection material (6; 15) and at least one continuous layer of a crisp confection material (1; 11) enrobed with a moisture barrier material (3; 12, 16).

2. Confection according to Claim 1, wherein the layer of crisp confection material is composed of a plurality of crisp layers (1) laminated with an adhesive confection material (2) of low water activity.

3. Confection according to Claim 1, wherein the moisture barrier is a couverture.

4. A method of manufacturing a couverture-coated, bar-shaped, frozen confection product comprising coating at least one side of an oblong slab of crisp confection material (1) with a moisture barrier material (3), putting this coated slab in contact with a piece (4) of ice cream of about the same length and width as the slab while arranging an adhesive material in between, applying at least one layer of chewy confection material (6), either before or after combining the ice cream and the crisp slab, and finally enrobing the composite so obtained with couverture (7).

5. The method of Claim 4, wherein the moisture barrier material (3) is a couverture.

6. The method of Claim 4 or 5, wherein the adhesive material is couverture while in a molten state.

7. The method of any Claims 4 to 6, wherein the ice cream (4) is coated with couverture (5) at least at the

side to contact the crisp material.

5 8. The method of manufacturing a couverture-coated,
bar-shaped, frozen confection product, wherein a mould (17)
is internally coated with couverture (16), thereafter
partly filled with a layer of ice cream (13) and at least
one layer of chewy confection material (15), a slab of
crisp confection material (11) having a moisture barrier
coating (12) on at least the side to contact the ice cream
10 is put in contact with the ice cream (13) and the open side
of the mould is closed with couverture.

 9. The method of any Claims 4 to 8, wherein the slab
of crisp material is enrobed with couverture before
15 contacting it with the ice cream.

 10. The method of Claim 4 or 8, wherein the slab of
crisp confection material is composed of a plurality of
crisp layers (1) laminated with an adhesive confection
20 material (2) of low water activity.

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Patents Act 1977**Examiner's report to the Comptroller and
Section 17 (The Search Report)****Application number**

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BAAA(ii) Int CI (Edition 5) B5A: AF39D; AT3P
A23G**Search Examiner**

B J GARDNER

Databases (see over)

(i) UK Patent Office

(ii) NONE

Date of Search

23 APRIL 1993

Documents considered relevant following a search in respect of claims 1 TO 10

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
	NONE	

SF2(p)

ms - doc99\fil001456



Category	Identity of document and relevant passages	Relevant to claim(s)

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